

Problem B: Marion's Drinking Game

Indiana gets involved in a perilous quest to find the Ark of the Covenant. In his journey, he finds himself requiring the assistance of Marion Ravenwood, an old love interest of him, who he hasn't seen in years.

He finds her in Nepal, where she owns a local tavern, and where she conducts drinking contests as a source of income. She does have an almost unnatural ability to drink liquor, but she also has an advantage against most players, because she is very good at the type of game that is played in her tavern.



Figure 1: Marion participating in a drinking contest

The game is played like this: a number of shot glasses with liquor are placed on a table. These glasses are arranged in N rows, where each row can have any positive number of glasses in it. Two players take turns drinking a certain number of shots from the table. At each player's turn, he/she has to pick a row, and drink a valid number of shots from that row. If it's the first row, only one shot can be drank. From the second row, 1 or 2 shots. From the third row, 1, 2 or 3 shots... and so on until the N th row, where any number of shots between 1 and N can be drank in a single turn.

The liquor in all these glasses is actually very mild, so any player can withstand these rounds. However, an extra glass of very strong liquor that is guaranteed to knock out anyone who drinks it, is placed aside, and it is drank only after all the other glasses are empty. This means that whoever drinks the last shot from the rows of glasses forces his/her opponent to drink the last glass, ensuring a victory.

Marion accepts a challenge from a robust man, and she goes first. Given a random arrangement of the drinks on the table, and assuming that both players drink optimally (they make the best decisions at each round), will she win the game?

Input

Input starts with a positive integer T , that denotes the number of test cases ($T \leq 1000$).

Each test case start with a single integer N in a line of its own, where N is the number of rows of drinks in the game. $1 \leq N \leq 100$.

The second line of each test case contains N integers separated by single spaces. The i th integer represents the number of glasses places on the i th row, starting with row number one. All these integers are in the range $[1, 1500]$.

Output

For each test case, print the case number, and then a message reporting if Marion wins the game or not.

The message must be either **Marion wins** or **Marion loses**, accordingly.

Sample Input

```
4
1
11
1
12
2
2 2
2
2 3
```

Output for Sample Input

```
Case 1: Marion wins
Case 2: Marion loses
Case 3: Marion wins
Case 4: Marion loses
```

Explanation of Sample Cases

In the first two games, there is only one row of glasses, so every player can drink one and only shot at every turn. From this, it's easy to figure out the winner.

In the third case, Marion can start by having 2 drinks from the second row, leaving no choice to her opponent but to drink one shot from the first row, and she has the last drink.

In the fourth case, Marion has three alternatives for the first move: drink one shot from the first row, or drink 1 or 2 shots from the second row. However, no matter what decision she takes, her opponent can drink the rest of shots from the same row, leaving the other row unchanged, and from that point on, his victory is guaranteed.